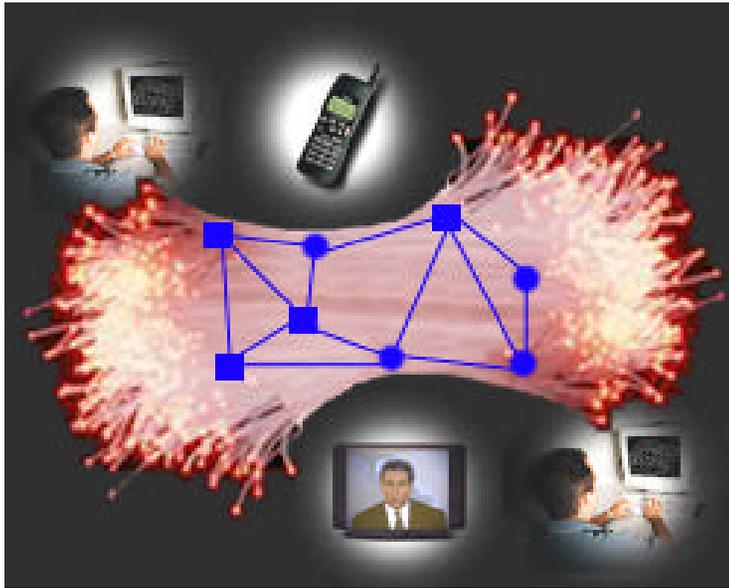


WDM Network Quality of Service



Goals

To achieve convergence between WDM QoS and QoS for existing network technologies.

Technical Objectives

- Define a QoS model for WDM networks including a set of parameters, service classes, protocols for QoS monitoring, parameter negotiation.
- Design QoS implementation schemes in WDM networks with respect to routing, wavelength assignment, reconfiguration and self-restoration.
- Propose and evaluate interworking mechanisms between existing QoS models (IP, ATM) and WDM QoS.

Expected Impact

- Achieve early consensus on the need for QoS and make it part of WDM reference architecture standards (OIF, ITU).
- Ensure that WDM protocols interwork with existing QoS in network technologies and provide support for multimedia.

Potential Customers and Collaborators

Customers

- Standard organizations: ANSI T1, ITU-T, Optical Internetworking Forum, IETF.
- Universities and research institutes.

Collaborators

- DARPA, NGI program.
- Universities.

Planned Accomplishments (FY 99 - 00)

- Develop a WDM QoS principles and architecture. (FY 99)
- Contribute our QoS principles and architecture model to the OIF/ANSI T1/ITU for inclusion in the architecture and requirement document. (FY 99-00)
- Implement WDM QoS using MERLiN simulator. (FY 00)
- Develop and evaluate algorithms for QoS wavelength assignment and routing. (FY 00)
- Conduct a performance evaluation and devise optimization techniques for traffic driven reconfiguration. (FY 00)